

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-4 and 26-37 are presently active; Claims 5-25 have been withdrawn by a Restriction Requirement, Claims 1-4, 26-32, and 34-36 has been amended. No new matter has been added.¹

In the outstanding Office Action, Claims 1, 26-27, and 30-33 were rejected under 35 U.S.C. § 102(b) as being anticipated by Futagawa et al (Jap. Pat. Publ. No. 2000-129442). Claims 2-5, 28-29, and 34-37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Futagawa et al in view of Iwasaki et al (U.S. Pat. No. 5,174,881).

Claim Summary: Claim 1 recites:

A processed object processing apparatus that processes objects to be processed, comprising:

first and second treatment chambers that are communicably and adjacently connected to each other and in which the objects to be processed are processed; and

one load lock chamber that is communicably and adjacently connected to said second treatment chamber, said one load lock chamber having a transfer arm that transfers the objects to be processed into and out of each of said first and second treatment chambers, and having a processed object holding part holding the object to be processed;

wherein said second treatment chamber is a vacuum treatment chamber, and said one load lock chamber and said first and second treatment chambers are aligned in the same straight line,

and wherein the transfer arm is capable of entering into both said first and second treatment chambers such that the transfer arm can transfer directly the object to be processed to said first and second treatment chambers.

Claim 2 recites:

A processed object processing apparatus that processes objects to be processed, comprising:

¹ Support for the added features in the claims are found in Applicants' Figures 1 and 2 and the discussion thereof at pages 28-30 and 35-38.

a COR (chemical oxide removal) treatment chamber in which the objects to be processed are subjected to COR treatment;
a vacuum treatment chamber in which the objects to be processed are subjected to other treatment, said COR treatment chamber and said vacuum treatment chamber being communicably and adjacently connected to each other; and
one load lock chamber that is communicably and adjacently connected to vacuum treatment chamber, said one load lock chamber having a transfer arm located therein that transfers the objects to be processed into and out of each of said COR treatment chamber and said vacuum treatment chamber, and having a processed object holding part holding the object to be processed, wherein said one load lock chamber, said COR treatment chamber and said vacuum treatment chamber are aligned in the same straight line, and wherein the transfer arm is capable of entering into both said COR treatment chamber and said vacuum treatment chamber such that the transfer arm can transfer directly the object to be processed to said COR treatment chamber and said vacuum treatment chamber.

According to Claim 1, the one load lock chamber and the first and second treatment chambers are aligned in the same straight line, and the transfer arm located in the one load lock chamber is capable of entering into both the first and second treatment chambers such that the transfer arm can transfer directly the object to be processed to the first and second treatment chambers.

Similarly, according to Claim 2, the one load lock chamber, the COR treatment chamber and the vacuum treatment chamber are aligned in the same straight line, and the transfer arm located in the one load lock chamber is capable of entering into both the COR treatment chamber and the vacuum treatment chamber such that the transfer arm can transfer directly the object to be processed to the COR treatment chamber and the vacuum treatment chamber.

Accordingly, the examiner will appreciate that Claims 1 and 2 can provide special effects in that the operation of transferring the objects to be processed between the treatment chambers is simplified, and hence a plurality of processes can be carried out efficiently such as for example the processes described in Applicants' Figures 3A, 3B, 4A, 4B, and 5.

Regarding the rejection on the merits: Futagawa et al describe that the load chamber 1 is disposed in a position such as to form a line with the heating chamber 3 and the first film forming chamber 4, and the unload chamber 7 is disposed in a position such as to form a line with the second film forming chamber 5 and the third film forming chamber 6 (see Fig. 1). Turning room 10 is used to transfer substrates from one path along heating chamber 3 and first film forming chamber 4 onto a second path along second film forming chamber 5 and third film forming chamber 6 before return to the unload chamber 7. Moreover, Futagawa et al describe that the desorption robot 23 attaches the substrate 8 to the holder 9 (see paragraph [0067] of machine translation, lines 5 to 6), and the substrate transfer equipment 14 attaches and detaches the substrate 8 to and from holder 9 (see paragraph [0125] of machine translation, lines 3 to 4).

However, Futagawa et al neither disclose nor suggest that the load chamber 1, the heating chamber 3, the first film forming chamber 4, the unload chamber 7, the second film forming chamber 5 and the third film forming chamber 6 are aligned in a same straight line. Rather, as noted above, these units are disposed along separate paths. Moreover, in Futagawa et al the desorption robot 23 (or the substrate transfer equipment 14) is **not** capable of entering into the heating chamber 3, the first film forming chamber 4, the second film forming chamber 5 and the third film forming chamber 6 for transferring directly the substrate 8 to each of the heating chamber 3, the first film forming chamber 4, the second film forming chamber 5 and the third film forming chamber 6. Thus, Futagawa et al do not disclose or suggest all the recited features in independent Claims 1 and 2.

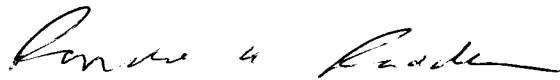
Furthermore, the deficiencies in Futagawa et al are not overcome by Iwasaki et al. Thus, Futagawa et al and Iwasaki et al neither individually nor in combination disclose nor suggest the claimed transfer arm defined in Claims 1 and 2.

Since M.P.E.P. § 2143.03 requires, to establish a case of *prima facie* obviousness, all the claim limitations must be taught or suggested by the prior art, Claims 1 and 2 as amended (and the claims dependent therefrom) are believed to patentably define over Futagawa et al and Iwasaki et al.

Consequently, in view of the present amendment and in light of the above discussions, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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